

forming a crystal nucleus of perovskite structure on the substrate, the crystal nucleus of perovskite structure comprising an oxide formed of lead and titanium;
positioning the substrate in the reactor;
heating the substrate to a predetermined temperature;
supplying the reactor with organic metal source gases comprising lead, zirconium, and titanium via the plurality of nozzles, wherein the organic metal source gases are diluted with a diluent gas;
supplying the reactor with an oxide gas via the separate discharge nozzle; and
forming a ferroelectric film on the substrate, the ferroelectric film comprising a perovskite crystal structure formed by an oxide comprising lead, zirconium, and titanium,

wherein a total pressure in the reactor is at least about 0.1 Torr.

✓ 2. (Amended) The method of claim 1, wherein

the oxide gas and the organic metal source gases of lead and titanium are supplied to the substrate at a pressure ranging from about 0.001 Torr to about 0.01 Torr.

✓ 3. (Amended) The method of claim 1, wherein

the oxide gas and the organic metal source gases of lead and titanium diluted with the diluent gas are supplied to the substrate at a pressure ranging from about 0.001 Torr to about 0.01 Torr.

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4. (Amended) The method of claim 1, wherein
the oxide gas and the organic metal source gases of lead and titanium diluted
with the diluent gas are supplied to the substrate at a pressure of at least about 0.1

Torr.

5. (Amended) The method of claim 1, wherein
the oxide gas and the organic metal source gases of lead and titanium diluted
with the diluent gas are supplied to the substrate by dissolving at least one of an organic
metal source of lead and titanium in an organic solvent and by evaporating the organic
solvent.

6. (Amended) The method of claim 1, further comprising:
dissolving at least one of an organic metal source of lead and titanium in an
organic solvent; and
evaporating and supplying the organic solvent with the organic metal source
gases and the diluent gas to the reactor.

7. Cancel without prejudice or disclaimer.

8. (Amended) The method of claim 1, wherein the total pressure is at least
partially achieved via the diluent gas.

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